

on back #1, 3
Practice 6-6

Placing Figures in the Coordinate Plane

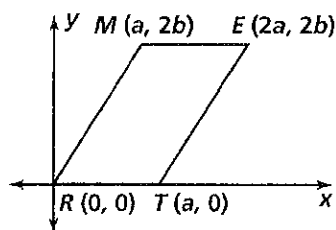
Find the coordinates of the midpoint of each segment and find the length of each segment.

1. \overline{ME}

2. \overline{ET}

3. \overline{TR}

4. \overline{RM}



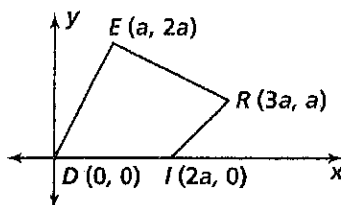
Find the slope of each segment.

5. \overline{DI}

6. \overline{IR}

7. \overline{RE}

8. \overline{DE}

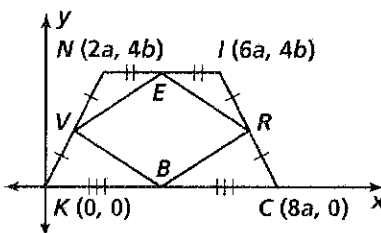


9. \overline{VE}

10. \overline{ER}

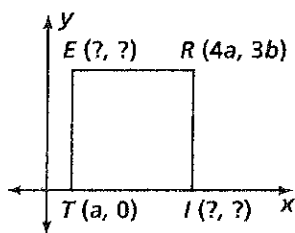
11. \overline{RB}

12. \overline{VB}

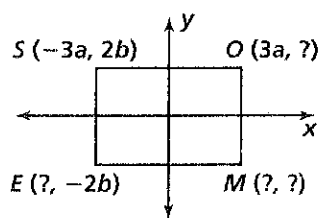


Use the properties of each figure to find the missing coordinates.

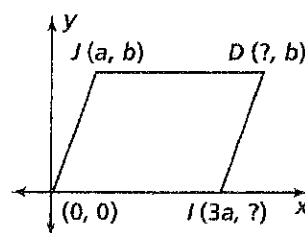
13. square



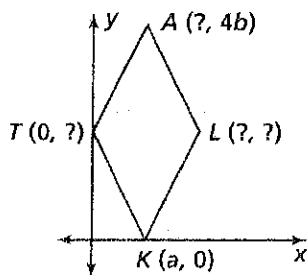
14. rectangle



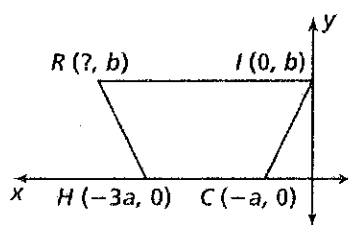
15. parallelogram



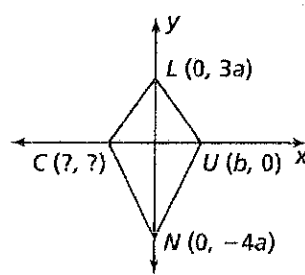
16. rhombus



17. isosceles trapezoid



18. kite

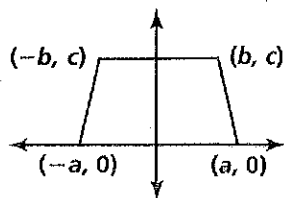


#1,3

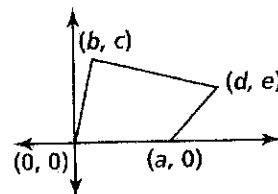
Exercises

Use coordinate geometry and the figures provided to prove the theorems.

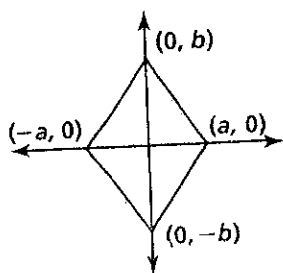
1. Diagonals of an isosceles trapezoid are congruent.



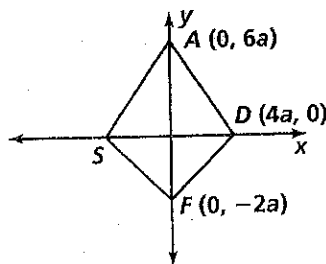
2. The segments joining the midpoints of a quadrilateral form a parallelogram.



3. The segments joining the midpoints of a rhombus form a rectangle.



4. $ADFS$ is a kite.
- Determine the coordinates of S .
 - Find the midpoint of \overline{AS} .
 - Find the slope of \overline{AS} .
 - Find the midpoint of \overline{DF} .
 - Find the slope of \overline{DF} .



Name #1-15, 18, 20-22, 24, 25

Date _____

LESSON 8.6 **Practice C**
For use with pages 552-557

Draw the sides or diagonals of $ABCD$ as described. What special type of quadrilateral is $ABCD$?

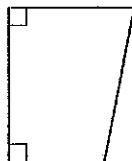
- $\overline{AC} \cong \overline{BD}$, \overline{AC} and \overline{BD} bisect one another, but \overline{AC} is not perpendicular to \overline{BD} .
- $\overline{AB} \cong \overline{BC}$ and $\overline{CD} \cong \overline{DA}$, but $\overline{BC} \not\cong \overline{CD}$.
- $\overline{AB} \parallel \overline{CD}$ and $\overline{BC} \cong \overline{DA}$.
- $\overline{AC} \perp \overline{BD}$, \overline{AC} and \overline{BD} bisect one another, but $\overline{AC} \not\cong \overline{BD}$.
- $\overline{AC} \perp \overline{BD}$, \overline{AC} and \overline{BD} bisect one another, and $\overline{AC} \cong \overline{BD}$.

Determine whether the statement is *always*, *sometimes*, or *never* true.

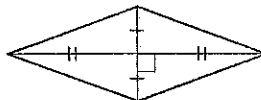
- Diagonals of a trapezoid are congruent.
- Opposite sides of a rectangle are congruent.
- A square is a rectangle.
- A square is not a rhombus.
- All angles of a parallelogram are congruent.
- Opposite angles of an isosceles trapezoid are congruent.
- The diagonals of a parallelogram are perpendicular.

Tell whether enough information is given in the diagram to classify the quadrilateral by the indicated name. *Explain*.

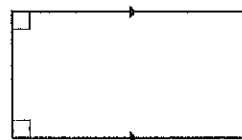
13. Trapezoid



14. Rhombus



15. Rectangle



Points P , Q , R , and S are the vertices of a quadrilateral. Give the most specific name for $PQRS$. *Justify* your answer.

- $P(-1, 3)$, $Q(4, 2)$, $R(1, -1)$, $S(-4, 0)$
- $P(-3, 5)$, $Q(-7, 6)$, $R(-9, -2)$, $S(-5, -3)$
- $P(-2, 9)$, $Q(-2, -1)$, $R(-5, 5)$, $S(-5, 7)$
- Use the quadrilateral in Exercise 17. Find the midpoint of each side. Connect the midpoints to form a new quadrilateral. What kind of quadrilateral is formed?

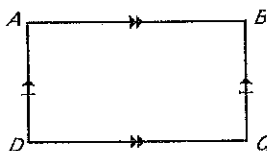
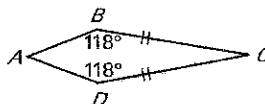
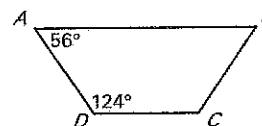
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Date _____

LESSON
8.6

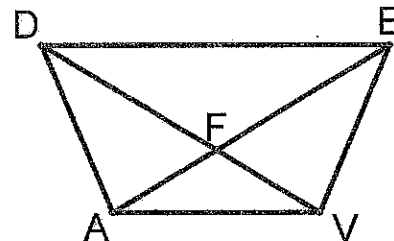
Practice C *continued* *For use with pages 552-557*

Which pairs of segments or angles must be congruent so that you can prove that $ABCD$ is the indicated quadrilateral? *Explain.* There may be more than one right answer.

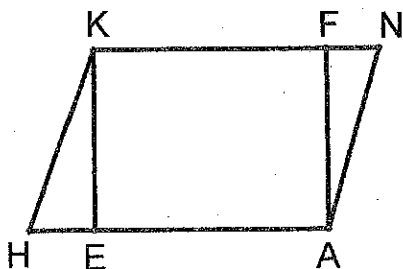
20. Rectangle

21. Kite

22. Isosceles Trapezoid


23. Let $ABCD$ be a quadrilateral with $\overline{AB} \cong \overline{BC}$, $\overline{CD} \cong \overline{DA}$, and $\overline{AB} \parallel \overline{CD}$. What type of quadrilateral is $ABCD$? *Verify* your answer by completing the proof.

Statements	Reasons
1. Draw \overline{AC} .	1. ?
2. $\overline{AB} \cong \overline{BC}$, $\overline{CD} \cong \overline{DA}$	2. ?
3. ?	3. Base Angles Theorem
4. ?	4. Given
5. $\angle CAB \cong \angle ACD$	5. ?
6. ?	6. Transitive Prop. of Congruence
7. $\overline{AC} \cong \overline{AC}$	7. ?
8. ?	8. ASA Congruence Postulate
9. $\overline{AB} \cong \overline{CD}$	9. ?
10. ?	10. Transitive Prop. of Congruence
11. ?	11. ?



24. Given: HANK is a rhombus. $\overline{HE} \cong \overline{FN}$
 Prove: EAFK is a parallelogram.



25. Given: $\overline{DE} \parallel \overline{AV}$, $\triangle DAV \cong \triangle EVA$
 Prove: DAVE is an isosceles trapezoid.